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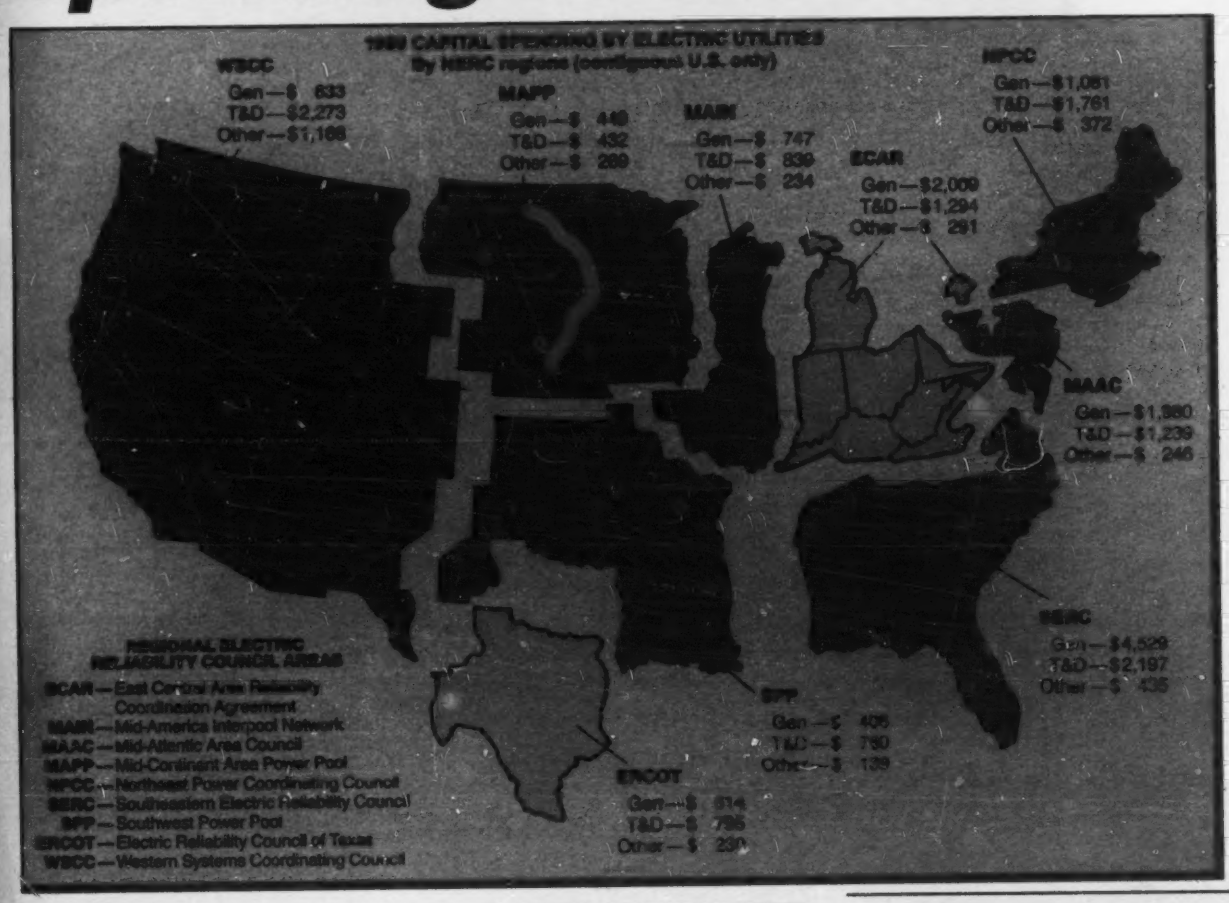
VOICE OF THE ELECTRIC UTILITY INDUSTRY

'89-'93 construction spending to increase



BARRINGTON, IL—Spending by U.S. electric utility organizations for new plants and facilities will total $128.7 billion over the five-year period 1989-1993. This reflects a 5.9-percent increase over spending for the five years 1988-1992 and suggests that the precipitous decline in construction activity is slowing and could bottom out by the end of 1991.

This is one of the major findings in *Electric Light & Power's* 1989 Capital Spending Survey, which was completed in November.

Spending for 1989 will be $27.4 billion, the survey indicates. This will be about the same as last year's survey indicated would be spent in 1988 and is 11.4 percent higher than projected for 1989 a year ago.

See the full capital spending survey report beginning on page 17

Generation spending in 1989 will increase very slightly from a year ago, to $12.4 billion from $12.3 billion in 1988. Although the increase is small, it is the first upward movement in generation construction spending in more than five years.

Spending for substations and for transmission facilities will increase by $376 million in 1989, to $4.2 billion, an increase of 9.8 percent from a year ago. Distribution spending, however, is projected to decline 7.4 percent, to $7.4 billion from projections of $7.9 billion in 1988. Despite slipping from the 1988 level, 1989 distribution spending nevertheless will be above that of 1987, indicating the strength of residential and commercial construction activity.

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LATE NEWS

Commonwealth Edison Co. accepted a 4.5%, $480-million, rate-hike compromise that includes a four-year freeze, far less than the $1.4 billion originally requested. **Seabrook could test** at low power Jan. 6, if owners show $72 million are available for decommissioning, and meet other conditions. The NRC also approved restart of Boston Edison's Pilgrim. **Pacific Gas & Electric Co.'s** Diablo Canyon nuclear plant rate case was approved by the California PSC with incentives for operation over 58% capacity annually. **Consumers Power Co.** and Bechtel Power Corp. have resolved claims resulting from construction of CP's abandoned Midland nuclear plant and set up a jointly owned generating company for CP's Palisades nuclear plant.

PSCC steps up HTGR closing

DENVER—Public Service Co. of Colorado plans to accelerate discontinuing nuclear operations at its Fort St. Vrain Nuclear Generating Station (FSV) by July 1990 at the latest.

The decision is not expected to have a material financial effect on the company nor hamper continued development of high-temperature, gas-cooled reactor (HTGR) technology.

Senior Vice President of Nuclear Operation R.O. Williams said the decision was made because of the difficult economics of successfully operating the pioneer-technology plant beyond the fuel capacity currently loaded in the reactor core.

A prepared statement from General Atomics (GA), designer and builder of the generating station, explained that major difficulties have been associated with a water-lubricated bearing for the circulators that push helium gas through the reactor for cooling. The plant, near Platteville, CO, was shutdown last July and is expected to restart this month.

Despite the troubled life of the plant beginning during its construction stage, Williams stated, "We feel the basic fuel design and reactor technology used at Fort St. Vrain is extremely sound." Linden Blue, GA vice chairman, added that FSV has provided a unique demonstration, experience now being fully integrated into the current, smaller, modular HTGR designs.

SDG&E agrees to SCE merger

SAN DIEGO—San Diego Gas & Electric Co.'s board agreed to merge with SCEcorp in a $2.56-billion deal that would create the nation's largest utility. Shareholders will likely vote on the proposal by April. The utilities also filed joint merger applications with state and federal regulators.

Not everyone is happy over the prospects. San Diego-area communities are concerned about losing a corporate headquarters and jobs, and they are studying ways to stop the deal, including municipalization.

SDG&E broke merger plans with Tucson Electric Power Co. in November over a disagreement about how to block SCEcorp's efforts to stop that merger.

As previously reported (*EL&P*, Sept. '88, p.1), merger benefits are expected to include: operational savings from contiguous service territories with diverse economic bases; resolved prudency issues on completed nuclear building; well-balanced fuel mix and facilitated access to low-cost northwestern and southwestern power sources.

Especially advantageous to SDG&E ratepayers is the promise of a 10-percent residential-rate decrease to be filed within six months of the merger.

Not everyone in the San Diego area is willing to accept the touted benefits, explained Leslie J. Girard, deputy city attorney. Girard said that after a meeting among leaders of more than a dozen area communities, the city put up $250,000 to study making the utility a public power organization. In addition, the County Water Authority is attempting to amend its charter to allow such a takeover.

Girard pointed out that some misinformation has been circulating and added that a majority of area media coverage on the issue has been negative.

Analysts at Moody's Investors Service

Continued on page 14

News Briefs

JILL MINNER, Assistant Editor

BPA and SoCalEd sign power sales agreement

The Bonneville Power Administration said it has signed a 20-year power sales and exchange contract with Southern California Edison Company. BPA expects the agreement to bring in a total of $363 million by the year 2003, based on the present value of surplus firm power sales. After 2003, the contract may convert to an exchange of energy and capacity until 2008, according to BPA. "Under the terms of the agreement, the sale will convert to an exchange arrangement when BPA no longer has a surplus of firm power to sell," explained Bonneville Power Administrator Jim Jura. During the exchange periods, BPA would receive winter energy from SoCalEd in return for summer capacity. The contract is pending approval of both state and federal regulators.

Idaho Power, Seattle City Light trade power

According to Idaho Power Co., it has agreed to a seasonal exchange of electricity with Seattle City Light. Idaho Power said the five-year agreement is desirable since its peak demand time is during the summer and Seattle City Light requires more power in winter. Seattle City Light operates the Lucky Peak power plant which will provide Idaho Power's energy.

Illinois Power study shows need for Clinton

A study conducted by Illinois Power Co. found that the utility would have experienced a critical shortfall in meeting customer needs for electricity this summer if the Clinton power station's generating capacity had not been available. "On at least 12 days, when we could not have purchased supplementary power from neighboring utilities, we would have been forced to curtail service to 88 major industrial customers," noted James E. McDonald, director of corporate communications for the utility. "In addition, power to 9 municipalities would have been interrupted on 6 of these 12 days," McDonald added. The study was submitted to the Illinois Commerce Commission.

Clinton station receives good ratings from NRC

Illinois Power Co.'s Clinton power station earned high ratings from the Nuclear Regulatory Commission in its annual Systematic Assessment of Licensee Perfomance, according to Illinois Power. NRC Regional Adminstrator A. Bert Davis described the company's performance as commendable during a demanding period of transition from testing to operation of the station. Clinton was evaluated from Sept. 1987 through Aug. 1988.

Atlantic Electric plans to build 75-MW turbine

Atlantic Electric plans to build a 75-MW combustion turbine on its property to help meet energy needs at peak demand times. The utility said it has already received initial approval for construction of the unit, which is scheduled to go into service by the summer of 1990.

AEP opens Tokyo econ. development office

American Electric Power Co. announced that it has opened an economic development office in Toyko. AEP said it is one of the first major electric utilities in the United States to establish a full-time industrial recruitment program in Japan. AEP President and Chief Operating Officer Richard E. Disbrow said the company has hired the international management consulting firm of Deltapoint International, Ltd. of Tokyo to be its full-time representative in Japan.

PUC okays ALLTEL's CP National acquisition

The Oregon Public Utility Commission has approved ALLTEL Corp.'s acquisition of CP National Corp. According to the commission, the acquisition will not affect CP National's former electrical service area in northeastern Oregon, which has been sold to the Oregon Trail Electric Consumers' Cooperative (see *EL&P* September issue, p.2).

Engineering consulting firm formed to serve electric utility industry

A new engineering consulting firm, Commonwealth Associates Inc. (CAI), has been formed to provide professional services to the electric utility industry. CAI said its services include transmission line engineering, substation engineering, distribution engineering, electrical system studies, surveying, right-of-way acquisition, construction management, route selection, and impact studies. Located in Jackson, MI, the employee-owned company is headed by Lester J. Walcott, president. Irwin O. Hasenwinkle and Robert J. Broad are vice presidents.

Broadhead is president and CEO of FPL Group

FPL Group Inc. has chosen James L. Broadhead as president and CEO, succeeding Marshall McDonald who retired Dec. 31. McDonald will serve as chairman of the company. Before taking on his position at FPL Group, Broadhead was president of GTE Corp.'s telephone operations.

Rogers selected as chairman, CEO of PSI

James E. Rogers, Jr. has been appointed chairman and CEO of Public Service Company of Indiana and head of PSI Holdings, Inc. Rogers, formerly executive vice president of Enron Corp., will replace the retiring Hugh A. Barker who will remain as director of the utility and PSI Holdings. Darrell V. Menscer will continue to serve as president and chief operating officer of PSI.

IEEE appoints Bayless president-elect for '89

The Institute of Electrical and Electronics Engineers has named Carleton A. Bayless president-elect. Bayless, a telecommunications consultant, will serve as president-elect during 1989 and will become president on Jan.1, 1990. George F. Abbott, director of special projects in telecommunications at North Carolina State University, was made executive vice president for 1989.

LADWP picks manager

Norman E. Nichols will serve as general manager and chief engineer of the Los Angeles Department of Water and Power, according to the city Board of Water and Power Commissioners. Nichols replaces Paul H. Lane who is retiring.

Hydro work wins NU consultant ASCE award

The American Society of Civil Engineers presented Antonio Ferreira with its first Phillip R. Hoffman Award, for distinguished contributions to the development of advanced hydroelectric technologies. Ferreira, a hydroelectric consultant for Northeast Utilities, was recognized as an industry leader in promoting pumped storage as an effective energy conversion technology. Ferreira was project manager during the design and construction of NU's Northfield Mountain pumped storage hydro generating station and worked on research projects for the Electric Power Research Institute.

BG&E asks customers to be 'energy managers'

As part of a program to foster wise energy use and help reduce the load on its generating capacity during peak demand periods, Baltimore Gas and Electric Co. (BG&E) is recruiting residential electric customers to become 'energy managers'. BG&E said its multi-leveled Energy Manager Program offers time-of-use rates that price electricity more cheaply during certain off-peak times. Customers may also elect to have a radio-controlled switch installed which permits BG&E to cycle air conditioners and heat pumps off and on for short periods in order to regulate energy demand. Participating customers would receive a $10-per-month reduction in their electric bills from June through September.

Electricity is safest fuel for homes, says study

Electricity is the safest fuel for residential energy use, according to a recent study conducted by Energy Research Group (ERG). In its study, ERG compared the risks of using gas, wood, coal, oil, kerosene, and electricity for residential energy needs. The research revealed that risk of fatality from wood and coal-fired systems is 15 times greater than from electricity, and gas-fired systems are nearly two and a half times more dangerous than electric systems. According to ERG, its findings were based on detailed calculations of the annual fatality and injury risks for three major residential energy end-uses: space heating, water heating and cooking.

Utilities fined by NRC

The Nuclear Regulatory Commission recently proposed the following fines:

Boston Edison Co.
A $50,000 civil penalty for a security violation at the Pilgrim nuclear power plant.

Commonwealth Edison Co.
A $150,000 fine for inadequate testing of electrical components at the Quad Cities nuclear plant.

Consolidated Edison Co.
A $75,000 fine for alleged violation of equipment qualification requirements at Unit 2 of the Indian Point nuclear plant

Neb. Public Power District
A $150,000 fine for alleged violations of NRC requirements at the Cooper nuclear station.

Philadelphia Electric Co.
A $50,000 fine for violations of security requirements at the Peach Bottom power station.

Virginia Power
A $50,000 civil penalty for alleged violation of NRC requirements a the Surry nuclear power plant.

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COMMENTARY

1988: busy year of contrasts; 1989 offers new opportunities

Looking back, 1988 wasn't a bad year for the electric utility industry. As we move into the new year, it's a good time to pause a moment and take stock of just what actually took place during 1988 and what the year ahead portends:

Utilities suffered through ice storms last winter. Then they were hit with prolonged heat storms and one of the dryest summers in history.

Demand jumped with summer temperatures. All-time high demands were recorded by many utilities on several occasions, only to be broken again a few weeks later. Yet, only two NERC areas suffered blackouts and brownouts.

Overall, utilities' earnings stabilized, even though they may not have increased much. But investor-owned companies' financial conditions generally are much stronger. Ambitious construction programs launched in the late 1970s and early 1980s were concluded. While earnings haven't exactly jumped, the elimination of Construction Work in Progress and Allowances for Funds Used During Construction means that cash, not just accountants' ink, is bolstering the *quality* of earnings, a long-overdue development that makes investors happy.

The Federal Energy Regulatory Commission announced plans to revise its PURPA regulations, establishing independent power producers as legitimate factors in the electric supply equation and encouraging competition between potential energy suppliers. Investor-owned utilities generally were cheered at the prospect of getting out from under having to buy high-cost cogenerators' power. But cooperatives and public power utilities immediately objected on the grounds that lack of transmission access effectively will restrict true competition and defeat FERC's goal. Fear of mandated open transmisssion access brought a new war cry from EEI and many investor-owned utilities.

A few leaders in co-op and public power organizations rattled sabers elsewhere during the year, apparently trying to renew the public vs. private power conflict of the '50s and '60s. But local organizations appear reluctant to answer the call. There really is room for all types of power suppliers in our economy.

On the nuclear front, NRC OK'd federal approval of utilities' emergency plans in the absence of state and local emergency planning, hopefully clearing the way for start up of both the Shoreham and Seabrook nuclear plants. But then NRC backed off and said that it wasn't pushing to speed licensed startup.

Beleagured Long Island Lighting Co. worked out a sweetheart deal with the state of New York, but at year end, was left high and dry by the state legislature, like a jilted bride waiting at the alter. Under the agreement, LILCo was to get a series of 5-percent rate increases and necessary future power supplies to meet demand in return for giving up Shoreham. Now, however, because investment-grade credit ratings are hampered by a law suit that could bankrupt the company, legislative support may not matter.

Merger mania commanded headlines, but when the clamor quieted and the dust settled, there weren't many unexpected changes, except for the San Diego Gas & Electric/Southern California Edison deal, and it hasn't been completed.

Elsewhere, a number of utilities trimmed workforce and several major suppliers entered agreements that further consolidated the largest manufacturers.

When you sort through all hoopla, and sift out the real achievements, it comes right down to the fact that the industry enjoyed a rather solid, normal good year. And that goes for most of its individual members, regardless of political pursuasion. Oh, a few worrisome problems remain, but for most suppliers of electric service, '88 was a good year and it appears that '89 will continue the trend.

Time will tell, of course, but we would expect the movements that began in 1988 to continue in 1989. The impact of proposed PURPA revision remains to be seen, but if it shakes out as current development suggests, there will be more competition and more open, albeit not free, access to transmission facilities. Reregulation efforts will continue under the Bush Administration, but '89 progress will be slow. Diversification will continue, where opportunities present themselves. And operational efficiencies will improve. All of these will contribute to continued stability. And customers may find their rates remaining stable, or declining, in real terms, if not in current-year dollars.

Each passing year seems to be more interesting than its predecessor. 1989 would appear to be no exception.

We hope yours will be rewarding and successful...and personally fulfilling.

Robert A. Lincicome, EL&P Editor-in-Chief

Electricity bills decreased last winter, says NARUC survey

WASHINGTON—The national average electricity cost last winter was 8.04¢/kWh, a slight decrease from the past year's cost of 8.1¢/kWh for 500 kWh, said a survey by the National Association of Regulatory Utility Commissioners.

The 0.7-percent decrease was noted in NARUC's 1987-88 Winter Survey of Residential Electric Bills, despite a 4.4-percent jump in the Consumer Price Index (CPI) during the same period. The previous year, the price stayed the same, with a 2-percent CPI increase.

Rank		DOE Region	Avg. Cost, Cents/kWh, 500 kWh '87-'88	'86-'87
1	2	Northeast	10.5	10.4
2	9	Pacific	9.5	9.2
3	1	New England	9.4	9.1
4	7	Central Plain	8.0	8.2
5	3	Mid-Atlantic	8.0	8.2
6	5	Mid-West	7.9	7.9
7	6	Southwest	7.7	7.8
8	8	Rocky Mountain	7.3	7.2
9	4	Southern	7.2	7.4
10	10	Northwest	5.2	5.1
		National Average	8.04	8.1

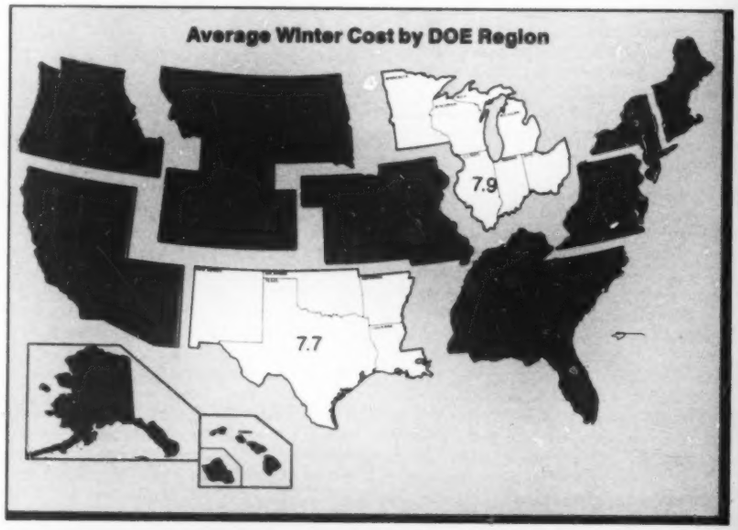
NARUC 1987-88 Winter Survey Of Residential Electric Bills

Although it was the first decrease in the 10-year history of the survey, both ends of the scale increased slightly over last year and differ about 300 percent. Costs ranged from a low of 4.2¢/kWh for Washington Water Power Co. customers in Lewiston, ID, to 13.5¢/kWh for Consolidated Edison Co. customers in New York, NY. That's up from 4.0¢/kWh and 13.1¢/kWh, respectively.

The study shows 10 service territories where consumers pay more than 11¢/kWh and 21 service areas where consumers pay less than 6¢/kWh.

The Northeast was most expensive and Northwest the least. Actual costs depend on usage level and state taxes.

The survey covers 195 service areas of major investor-owned regulated electric utilities in 49 states and the District of Columbia; unregulated Nebraska has none. The bills for residential electric service for December, January and February were reported to NARUC for four different levels of energy consumption: 250, 500, 750 and 1000 kWh.



Twelve Most Expensive Service Territories

Company	State	Avg. Cost Cents 500 kWh	Winter '87-'88 Rank
Consolidated Edison Co. of N.Y.	New York	$0.135	1
Kauai Electric Co.	Hawaii	$0.127	2
Long Island Lighting Co.	New York	$0.124	3
Nantucket Electric Company	Massachusetts	$0.119	4
San Diego Gas & Electric Co.	California	$0.118	5
Hawaii Electric Light Co.	Hawaii	$0.118	6
Philadelphia Electric Co.	Pennsylvania	$0.116	7
Boston Edison	Massachusetts	$0.114	8
Maui Electric Co.	Hawaii	$0.113	9
Orange & Rockland Utilities Inc.	New York	$0.112	10
United Illuminating Co.	Connecticut	$0.109	11
Atlantic City Electric Co.	New Jersey	$0.109	12

Twelve Least Expensive Service Territories

Company	State	Avg. Cost Cents 500 kWh	Winter '87-'88 Rank
Washington Water Power Co.	Idaho	$0.042	195
Washington Water Power Co.	Washington	$0.043	194
CP National Corp.	Oregon	$0.044	193
Idaho Power Co.	Idaho	$0.044	192
Pacific Power & Light Company	Washington	$0.044	191
Kentucky Utilities Co.	Kentucky	$0.047	190
Idaho Power Co.	Oregon	$0.048	189
Puget Sound Power & Light Co.	Washington	$0.049	188
Berea College	Kentucky	$0.050	187
Potomac Electric Power Co.	DC	$0.051	186
Portland General Elec. Co.	Oregon	$0.051	185
Citizens Utilities Co.	Vermont	$0.055	184

Source: NARUC 1987-1988 Winter Survey of Residential Electric Bills

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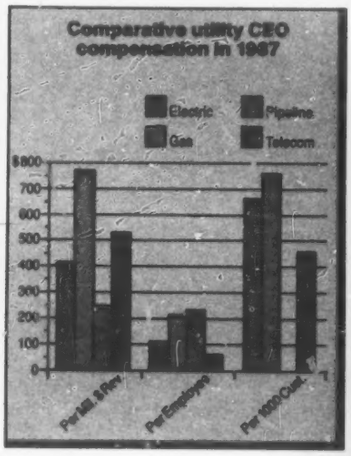
Incentive compensation comes of age

BARRINGTON, IL—Emphasis on annual cash incentive bonuses for electric utility executives increased during the period from 1982 through 1987. In fact, more than 70 percent of investor-owned electric utility companies that had such incentive programs in place at the end of 1987 adopted them during that period.

Moreover, to paraphrase Olympic gold medal gymnast Mary Lou Retton during a Wheaties commercial a few years back, "Annual bonus programs ain't just for the big boys." Indeed, 64 percent of investor-owned utilities with annual revenues between $250-$500 million have such programs.



These are just two of the highlights of a recently published comprehensive study of compensation practices of 251 investor-owned utilities conducted by the Washington, DC-based Utilities Consulting Group. Of the companies studied, 136 were electric or combination electric and gas utilities. Gas distributors accounted for 53 and the balance represented telecommunications, water and pipeline companies. The electric companies surveyed represent virtually all the investor-owned electric utilities with 1987 revenues in excess of $25 million. Included were eight large holding companies with two or more operating subsidiaries, 22 subsidiary operating companies, 57 independent electric utilities and 49 independent combination electric and gas utilities.

The report provides a database consisting of separate company analyses and shows cash compensation for up to 10 officers, as well as incentive, deferred and retirement compensation programs for each company.

Impact of the 1986 Tax Reform Act

According to David Marder, president of Utility Consulting Group and author of the study report, the 1986 Tax Reform Act has had a stronger impact on executive compensation than any other recent piece of legislation. "While the Act does not eliminate the appeal of capital appreciation, such appreciation is now taxed at the same rate as ordinary income. This removes some incentive for owning real shares of one's company stock...and strengthens the attractiveness of such incentives as phantom shares and stock appreciation rights, means by which executives can benefit from increases in the value of their company's shares without actually owning shares." Overall, he said, "the act strengthens the use of cash as the principal medium of executive compensation, whether such award is for short- or long-term performance."

He went on to say that the current maximum tax rate of 33 percent has taken the luster off income deferral. In terms of its impact on pensions and retirement programs, he said the study points out the fact that Section 415 of the Tax Code, as modified by the Act, has forced electric utilities to develop alternative means of rewarding their executives. This has meant developing a range of supplemental plans to counter the limitations of the Code.

Key officer compensation

In response to the question of how electric utility executives are compensated in comparison with executives of other types of utilities, the answer is, on balance, not too badly. Measuring compensation against various indices of company size (revenues, number of employees and number of customers), the *average* electric utility CEO did reasonably well, although not as well as his counterpart in the gas industry.

Recent salary increases

The study revealed that the average investor-owned utility executive saw his 1987 cash compensation increase 15.5 percent, while the average for all

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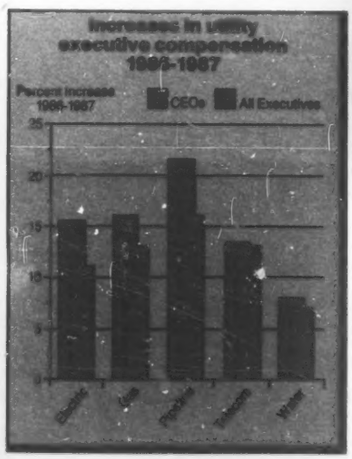


People today are rightly concerned about preserving our natural environment for the good of all—including future generations. The people at Dow are too.

In formulating herbicides beneficial to vegetation management needs, Dow has taken particular care to respect everyone's desire for a clean, safe world.

The products of these efforts—GARLON,* TORDON* and ACCESS* herbicides—have gained broad acceptance because they control undesirable woody plants on

utility industry officers was 11.8 percent. These figures track favorably with a recent national survey of U.S. executive compensation, which found that in 1987 the average CEO in industry saw an increase in cash compensation of 11.5 percent.

CEOs highest

Among the five categories of utility business, pipeline company CEOs received the highest increases (22 percent), while CEOs of water companies received the smallest increases (8 percent). For other officers included in the study, those working for pipeline companies enjoyed the greatest '87 gain (16.5 percent), while water company officers received the least (7 percent).

Between 1982 and 1987, the median electric utility CEO realized an increase of 53 percent in cash compensation, while a gas utility CEO received a 45 percent gain. For all officers of investor-owned electric utilities, the average increase was just under 39 percent. The study examined the level of increase over the five-year period for each of 17 officer positions and found that cash compensation of the principal legal officer increased the most, 72 percent, while the gain for the principal regulatory officer, 21 percent, was the lowest.

Incentive compensation

The use of cash award, short-term incentive compensation is not just the province of larger electric utilities. Fourteen of 22 smaller companies in the sample, with '87 revenues between $250-500 million, also make use of such incentives.

Electric utilities with short-term incentive compensation plans

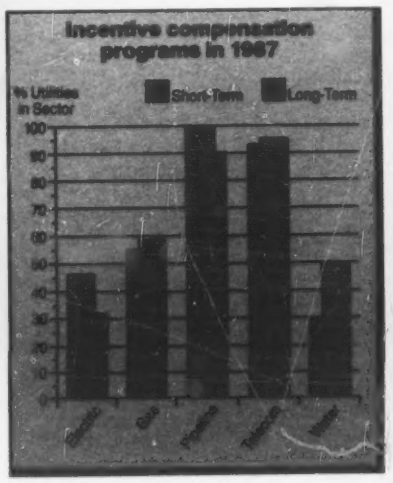
Util. Rev. size	# in sample	% with plans
$5 B and up	5	60
$2-4.999 B	18	55
$1-1.999 B	24	46
$500-999 M	25	44
$250-499 M	22	64
$100-249 M	9	33
Under $100 M	11	0
Total	114	46

The study describes each of the incentive programs for the 52 companies reporting them, detailing the year in which the programs were started, the criteria employed to determine whether awards will be made, the maximum percentage of salary that an individual award can represent, the percentage of total compensation that 1987 awards represented and the categories of executives included in the award group.

The report stated that long-term incentive compensation programs have become less important in overall executive compensation programs. This, it says, is the result of "ever-increasing emphasis on current performance throughout American business, especially among stock-exchange listed companies." The report goes on to discuss the specific implications of the 1986 Tax Reform Act on long-term incentives and describes the use of phantom stock, stock appreciation rights and other stock-related awards in this area. It reviews the practices of the one-in-three utilities that reported having such long-term programs in force in 1987.

Golden parachutes

Marder points out in the study that "The utility industry may well become no different from others when it comes to mergers, buyouts and the prospect of unwanted takeovers. As a result, even in the asset-intense electric utility industry, senior officers are asking for and gaining agreements to protect their incomes and pensions in the event of termination following change of control of the company."



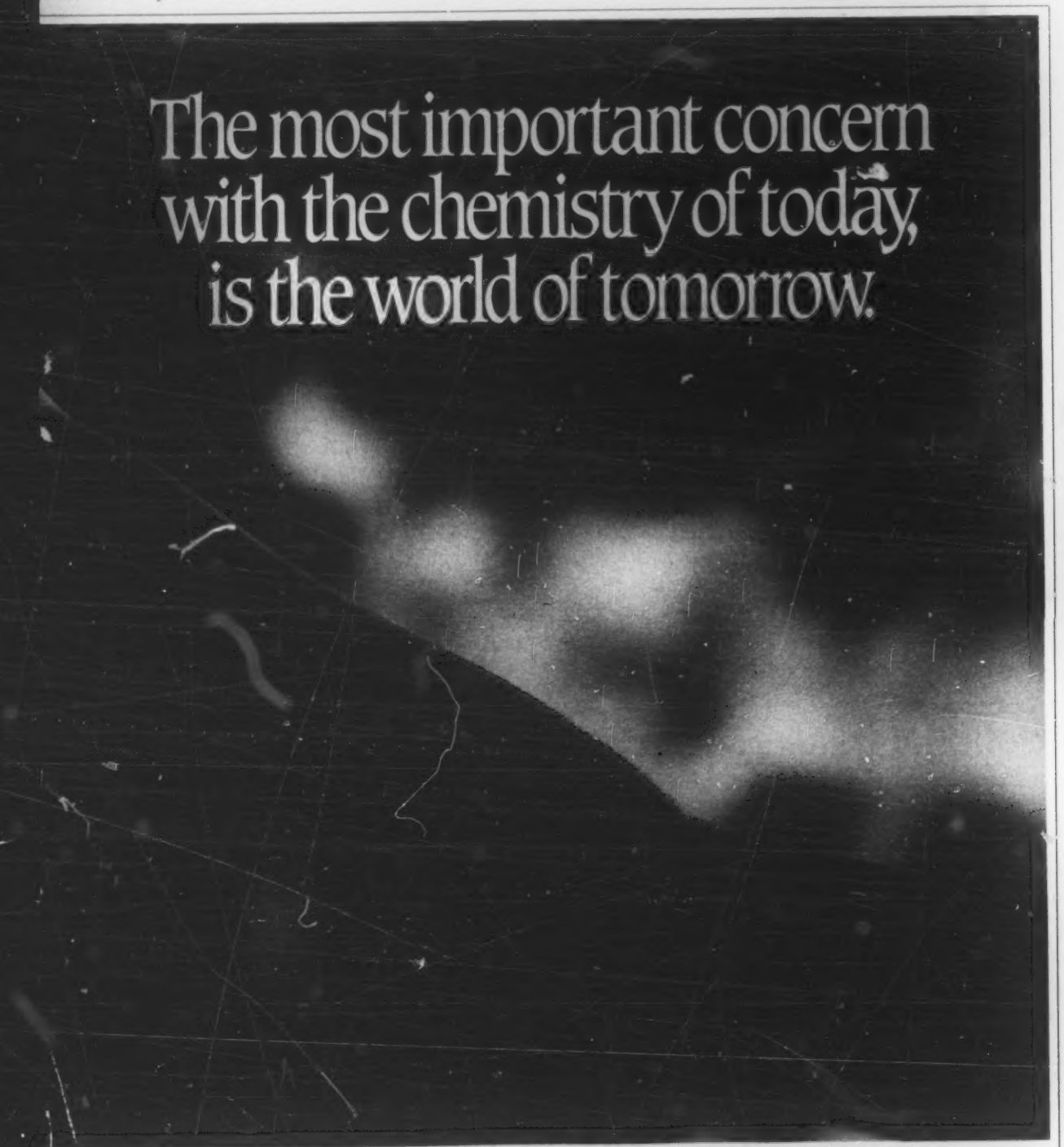
The study showed 16 investor-owned electric utilities with such agreements with senior executives in force at the end of 1987. These companies ranged in size from $57 million in '87 revenues (Upper Peninsula Power) to one with '87 revenues of $4.35 billion (Florida Power & Light Co.), which is itself a subsidiary of FPL Group. The report further indicated that among these companies, the "three-times" rule generally applies (the covered executives are guaranteed three times their salaries or, in some cases, salaries plus bonuses) if terminated as a result of change of control of the utility. In a few cases, the rule also applies if executives leave voluntarily as a result of such change of control.

Deferred, retirement compensation

A specific fallout of the Tax Reform Act of 1986, the study explains, is the negative impact on the attractiveness of 401(k) retirement plans for highly paid executives. "Previously," the report says, "an executive could defer a portion of annual salary up to $30,000 to his 401(k) account. With a change to a more egalitarian approach in the Code and a corresponding drop in the maximum amount of tax-free deferral from $30,000 to $7,000, the 401(k) is a far less attractive executive compensation element."

Nonetheless, the study shows that about 54 percent of investor-owned

Continued on page 8



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Executives consider increased diversification worth the risk

CLEVELAND, OH—More than 75 percent of utility executives—but only 42 percent of state commissioners—believe that the potential advantages of diversification outweigh potential risks and disadvantages, said a recent survey of utility executives and state commissioners by Price Waterhouse.

Diversifying helped

Just half of the commissioners said diversifying has helped utilities financial situations, while 65 percent of executives thought so.

Most utilities said diversification accounted for less than 1 percent of earnings, but more than 64 percent of both utilities and regulators predicted diversification activities would increase.

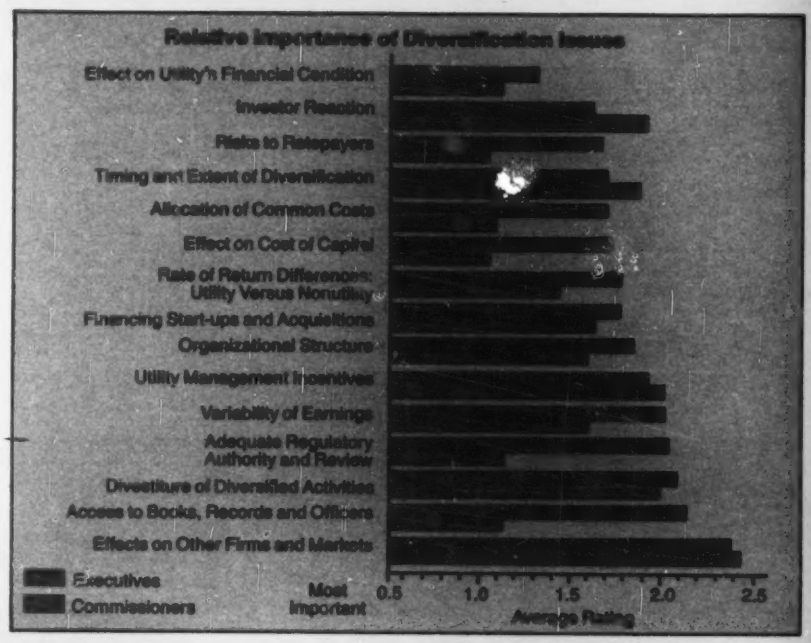
Trends and attitudes

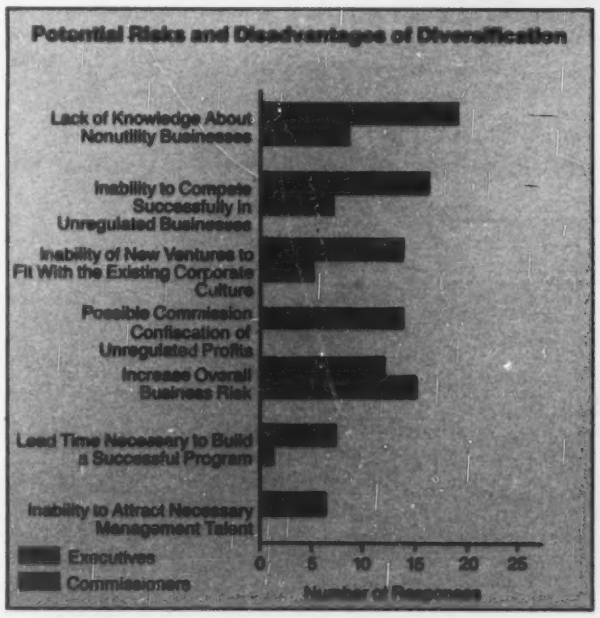
Although the survey covers trends and attitudes on diversification, it only includes responses from 27 utilities and 15 commissioners and so may not be representative of all 207 investor-owned utilities and all regulators.

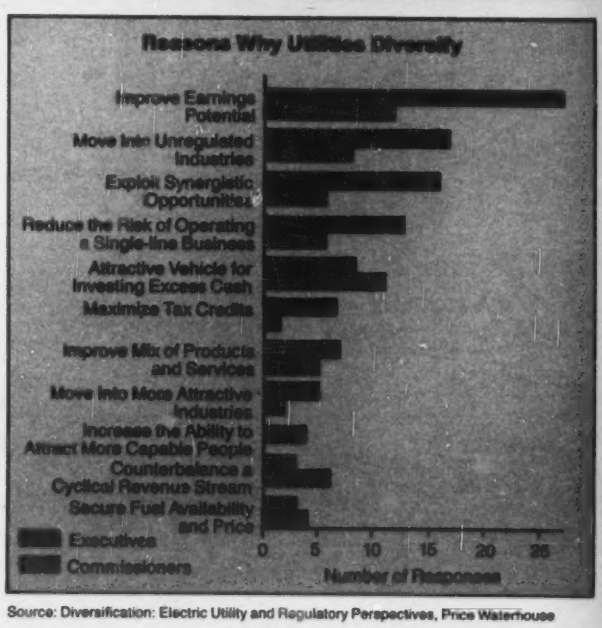
Key findings

Some of the key findings were that:

- The opportunity to increase earnings was most frequently mentioned by both groups as the prime reason to diversify.
- Lack of knowledge about nonutility businesses and the inability to compete successfully in unregulated businesses were two most frequently mentioned risks by utilities. The fear of increasing overall risk was cited as most dangerous by commissioners.
- Energy-related ventures were seen as most appropriate.
- The three utilities most cited as having the most extensive diversification programs were: FPL Group Inc., Pacificorp and Florida Progress Corp.
- The most important issues related to diversification included: effect on finances, investor reaction, ratepayer risk, common cost allocation, effect on cost of capital and adequate regulatory authority and review.







Source: Diversification: Electric Utility and Regulatory Perspectives, Price Waterhouse

N-plants operated more safely post-'84

WASHINGTON—U.S. utilities have operated their nuclear power plants more safely since 1984, suggested a recent Nuclear Regulatory Commission staff report.

Key indicators

A number of key performance indicators, averaged industry-wide, showed improvement over three years:

- "Significant events" dropped from an average of 2.4 events per reactor in 1985 to 1.6 in 1986 to 0.8 in 1987.
- Average number of unplanned automatic reactor "trips" per year decreased from 5.2 in 1984 to 3.2 in 1987.
- Average number of challenges to the emergency core cooling systems and emergency diesel generators decreased from 2.8 in 1984 to 1.7 in 1987.
- Average radiation exposure to workers at nuclear power plants decreased from 714 man-rem per reactor in 1984 to 425 man-rem per reactor in 1987.
- The number of plant shutdowns required by individual plant technical specifications remained low.
- The number of events determined by the staff to be significant from a risk standpoint also declined, from 17 in 1984 to six in 1986.

Three years = 30.8 GW N-capacity

From 1984 to 1987, 28 nuclear power plants, generating 30,800 MW, received operating licenses. In 1987, five new units were licensed for low-power testing and eight were licensed for full-power operation. At the end of 1987, licensed reactors numbered 109.

Areas for plant-specific improvements for safety and plant performance include air systems, decay heat removal, motor-operated valves and human performance.

Other staff studies have shown that human factors involving deficient procedure, deviation from procedures, lack of adequate procedure or inadequate training continue to be the cause of many problems.

For copies

The two-volume "Report to the U.S. Nuclear Regulatory Commission on Analysis and Evaluation of Operational Data—1987" was prepared by the NRC's Office of Analysis and Evaluation of Operational Data. That office was created after the 1979 Three Mile Island accident.

The report is available from the Government Printing Office, P.O. Box 37082, Washington, DC, 20013-7082, telephone, 202/275-2060.

National quality awards to two industry suppliers

WASHINGTON, DC—Two leading industry suppliers—the Commercial Nuclear Fuel division of Westinghouse Electric Corp. and Motorola Inc.—have earned the first Malcolm Baldrige National Quality Awards in ceremonies here. The awards were presented by President Reagan.

The award, for demonstrated excellence in the quest for product quality, was named after former Secretary of Commerce Malcolm Baldrige, and was established by Congressional legislation passed in 1987. Its purpose is to promote national awareness of the importance of improving quality in products and services in order to improve the global competitiveness of U.S. companies, and to recognize quality achievements toward those ends by U.S. companies.

Commerce Secretary C. William Verity said the companies serve as "inspiring examples of what can be accomplished...in improving quality, strength and market position."

Westinghouse Chairman and CEO John C. Marous called the company's nuclear business the public's business. "I hope that this recognition of our...devotion to quality improvement will reflect credit on the entire industry, which is so important to the economic well being of the entire nation. That's what the Malcolm Baldrige Awards are all about...helping American companies become world class."

He declared that quality is the key to the company's growth and to its success as a business.

Speaking for Motorola, Robert W. Galvin, chairman, described the company's driving thrust as renewal. He recounted how Motorola aimed for total customer satisfaction and elevated its quality standards. He also declared that the company still realizes that "there is more to do." He also predicted virtual product perfection by 1992.

A third award was presented to Globe Metallurgical, a small specialty metals firm in Ohio.

Secretary Verity presented a special distinguished public service award to John J. Hudiburg, chairman and CEO of Florida Power & Light Co., for his personal efforts in developing and bringing the nation's first award system for corporate excellence, the Malcolm Baldrige Award, to fruition.

Selection of the winners followed a comprehensive evaluation process by an independent board of examiners composed of private sector authorities on quality measurement.

from page 7

Incentive compensation...

electric utilities have deferred compensation programs for executives.

In the area of retirement compensation, the study revealed that, with few exceptions, all investor-owned utilities have non-contributory, defined benefit pension plans for employees. Section 415 of the Tax Code states that in the use of such plans, the highest annual benefit payable under the plan must not exceed the lesser of (a) 100 percent of a participant's average compensation in the highest three consecutive years of employment or (b) $94,023 (the inflation-indexed amount in 1988). This restriction effectively limits the use solely of a standard *all-employee* pension plan to cover the retirement compensation of more highly paid executives. Therefore, a number of supplemental plans have been instituted. Approximately 86 percent of electric utilities report the use of such supplemental plans.

The complete bound report, *Executive Compensation Among Utilities: 1988*, is available from the Utilities Consulting Group, 4801 Massachusetts Ave. NW, Washington, DC 20016. The price is $1,795.

Construction spending to increase; generation activity to pick up

Gas and oil favored for new generating units, T&D spending to continue at healthy level

Robert A. Lincicome
Editor-in-Chief

The electric utility industry is stepping up its construction activities, continuing the turnaround and upswing begun a year ago. Spending in 1989 will be above that predicted a year ago and construction plans for the five-year period ending with 1993 will increase almost 6 percent, compared with the five-year period ending in 1992, as projected in the January 1988 issue of *EL&P*.

Moreover, capital spending for new and upgraded generating facilities in 1989 will grow over 1988, albeit by only a small amount, finally reversing the downward trend of the last decade.

These are some of the more important conclusions from *EL&P*'s 1989 survey of electric utility capital spending plans, which was completed in late November.

The survey covers utilities of all types—investor-owned, cooperative federal, municipal and other publicly owned electric service organizations. Results are projected to represent the full industry.

'89 spending could equal '88

Total 1989 capital spending is projected to be $27.4 billion, marginally less than was projected to be spent in 1988, but about 11 percent higher than was predicted for 1989 in last year's forecast report.

The increase reflects relatively steady capital spending programs in most NERC areas, with only small increases and decreases from last year for most NERC areas. The exceptions were the Northeast Power Coordinating Council, whose construction activity is projected to increase by more than $1.4 billion, and the Western Systems Coordinating Council, for which spending plans appear to be off by an even greater $1.8 billion.

In 1989, generation spending, as suggested above, will increase about 0.8 percent, to $12.4 billion from $12.3 billion in 1988. However, the amount projected to be spent this year is almost 16-percent greater than was projected for 1989 in last year's forecast.

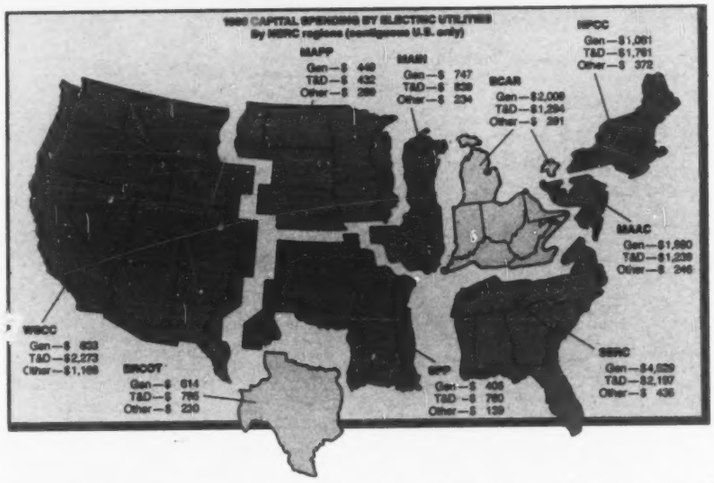
Transmission & distribution spending in 1989 should total $11.6 billion, down about 5.2 percent from 1988 projections, but up about 7.6 percent from last year's estimates of 1989 T&D spending.

Other spending in 1989 should increase about 3.0 percent.

Five-year projections

Overall, electric utilities will spend $128.7 billion in the five years 1989-1993. This represents a 5.9-percent increase from the five-year spending total projected in January 1988, and continues the turnaround trend begun a year ago.

Generation continues to be the largest single category of capital spending and, compared to other spending plans, shows a small increase in relative share of each capital dollar spent for the entire five-year period. Although spending for generation facilities will represent a smaller share of capital investment in 1990, 1991 and 1992, by 1993 generation spending will be just over 46 percent of total construction spending, the highest share since 1986. Also, in those three intermediate years, the percentage that will be devoted to generation system expansion, though below total T&D spending, will increase compared with the generation spending plans for those three years given in the 1988 forecast.



Combined spending for transmission and distribution facilities, including substations, will receive a larger portion of each capital dollar spent—averaging 46.9 percent—in 1990, 1991 and 1992. For the five-year period, U.S. utilities will spend some $58.1 billion for T&D facilities, 7.6 percent more than will be spent for generation facilities in the same period.

Spending in "Other" categories of capital investment will increase about $1.5 billion over the current five-year period—to $16.6 billion—from $15.2 billion projected for the period 1988-1992. The amount to be spent will run between 12.3 to 13.8 percent of total capital spending until 1993, when it will fall to under 11 percent.

Generation construction to grow

The 1989 study indicates that respondents will invest some $54.0 billion for generation system expansion in the five years 1989-1993. This represents an increase of almost $5 billion from last year's forecast for the five years 1988-1992. The increase is about 10 percent.

Spending for generation, $12.4 billion in 1989, will decrease in the next two years before turning upward in 1992 and 1993.

With an industry reserve in excess of 22 percent over summer peak demand, it is not unusual that respondent utilities showed a sharp movement away from baseload steam capacity for their "next" units. In fact, four NERC regions reported no plans for adding baseload steam units next. ECAR, MAAC and SPP each reported plans to add two baseload steam units next. Both ERCOT and MAPP indicated plans to add one baseload steam unit next.

The majority of "next" units to be added will be either combustion turbines (39) or combined cycle units. Interestingly, 14 other types of generating units were mentioned as "next" units, nearly double the number of baseload steam units.

While spending figures have been projected to reflect total industry capital investment levels during the next five years, plans for new capacity reflect only the actual responses from reporting utilities.

5-year T&D spending to grow

Transmission and distribution expansion plans indicate an increase of about 1.0 percent in construction activity during the 1989-1993 period. Five-year spending projections indicate a total of $58.1 billion will be spent, compared with 57.5 billion in the five-year period ending in 1992.

Substation spending figures remain fairly constant for the period, running between a high of $1.7 billion in 1989 to a low of $1.5 billion in 1992, averaging about $1.6 billion per year. Substation investment is understated since a number of utilities reported that they include substations in either transmission, distribution or in both catagories of activity. Conversely, both transmission and distribution investment are somewhat overstated.

Transmission, projected at $12.3 billion, reflects a slight decline in activity over the next five years. Despite announced plans to avail themselves of abundant Canadian power, which involves building substantial new transmission capacity, utilities generally plan to spend about 7-percent less for transmission than reported a year ago.

Distribution construction activity appears to remain strong through the five-year period, although the rate of increase is small. The industry plans to invest about $38.1 billion for new distribution facilities over the five-year period, which is about 1.0 percent more than was projected in last year's survey.

Distribution construction spending should increase through the first four years of the period, but will fall off substantially in the last year of the period, according to responses. However, it was not possible to determine if this was a significant shift in investment or just the result of the shorter leadtime nature of distribution spending affecting the fifth year in the forecasting cycle.

Capital spending in the "other" catagory also is expected to grow during the 1989-1993 period over projections for the 1988-1992 period. Whereas capital spending in this classification averaged about $3.0 billion for each of the five years in last year's forecast, the average for this year's forecast is $3.3 billion, a

Continued on page 18

ECAR	East Central Area Reliability Coordination Area
ERCOT	Electric Reliability Council of Texas
MAAC	Mid-Atlantic Area Council
MAIN	Mid-America Interpool Network
MAPP	Mid-Continent Area Power Pool
NPCC	Northeast Power Coordinating Council
SERC	Southeastern Electric Reliability Council
SPP	Southwest Power Pool
WSCC	Western Systems Coordinating Council

Region	Generation	Substation	Transmission	Distribution	Other	Total
ECAR	2,009	152	270	872	291	3,594
ERCOT	614	15	259	521	230	1,639
MAAC	1,980	39	140	1,060	246	3,465
MAIN	747	64	175	600	234	1,820
MAPP	449	43	95	188	269	1,150
NPCC	1,081	297	530	934	372	3,214
SERC	4,529	287	611	1,299	435	7,161
SPP	406	192	107	461	139	1,305
WSCC	633	578	345	1,350	1,166	4,074
Total	12,448	1,673	2,532	7,385	3,384	27,422

	1989	1990	1991	1992	1993
Generation	45.4%	39.9%	38.4%	39.8%	46.1%
T&D	42.3%	46.4%	47.8%	46.6%	43.0%
Other	12.3%	13.7%	13.8%	13.6%	10.9%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

PROJECTED 5-YEAR CAPITAL EXPENDITURES (By NERC Region — In Millions of $)						
Region	1989	1990	1991	1992	1993	5-Year total
ECAR	$ 3,594	$ 3,505	$ 3,314	$ 2,955	$ 2,705	$ 16,073
ERCOT	1,639	1,412	1,378	1,599	2,355	8,383
MAAC	3,465	3,192	2,926	3,000	2,565	15,148
MAIN	1,820	1,880	1,656	1,633	708	7,697
MAPP	1,150	1,252	1,279	1,040	1,071	5,792
NPCC	3,214	2,628	2,619	2,702	2,659	13,822
SERC	7,161	5,986	6,218	7,255	8,350	34,970
SPP	1,305	1,373	1,368	1,440	1,629	7,115
WSCC	4,674	3,921	4,195	4,436	3,082	19,708
Total	$27,422	$25,148	$24,953	$26,061	$25,124	$128,708

PROJECTED 5-YEAR CAPITAL EXPENDITURES (By Function — In Millions of $)						
Function	1989	1990	1991	1992	1993	5-Year total
Generation	$ 12,448	$ 10,026	$ 9,573	$ 10,380	$ 11,570	$ 53,997
Substations	1,673	1,521	1,562	1,475	1,565	7,796
Transmission	2,532	2,410	2,579	2,516	2,217	12,254
Distribution	7,385	7,728	7,783	8,141	7,028	38,065
Other	3,384	3,463	3,456	3,548	2,745	16,596
Total	$27,422	$25,148	$24,953	$26,060	$25,125	$128,708

10-percent increase.

As mentioned in last year's report, earlier capital forecasts reflected substantial "other" spending for headquarters and other general-use buildings, certain capitalized fuel resources and the like; present "other" spending includes investment in facilities and resources involved in utilities' diversification programs as well.

Next capacity planned

Fifteen utilities will bring their next generating unit on-line by the end of 1991. A similar number, 15, said that they will bring their next unit on-line after the year 2000. Forty-three utilities will bring their next units on line between 1991 and 2000.

The year of greatest activity will be 1995, when nine utilities will put their next units into service. 1993 ranks as the second most active year, with eight next units going into service. Seven utilities will bring their next units on-line in 1990 and 1997.

As show in the adjacent table, 15 utilities will bring their next units on-line in the 1989-1991 period, 13 in the 1992-94 period, 20 in 1995-97 and 10 in the 1998-2000 period. Fifteen utilities will not commission their next unit until after 2000.

Respondents told *EL&P* that they are planning few large units for the next to be built. Fifty-three units will be under 250 MW in size and only 16 will be 250 MW or larger. Only seven units planned as the next unit for respondent utilities will exceed 500 MW.

Interest in small-size units results from a combination of generally healthy reseve generating margins, relatively low demand-growth rates and the demonstrated reluctance of regulatory commissions to allow utilities to add unneccessary capacity into the rate base. Also, a number of utilities are confident of maintaining sufficient baseload capacity levels through the use of purchased power, and therefore are looking only to add peaking or cycling unit, either in simple cycle configurations or in combined cycle schemes.

Combustion turbines favored

As mentioned above, primary interest for the next unit to be added to respondent systems is combustion turbines, which offer short lead times, small incremental sizes, and low capital costs, but high operating costs.

According to survey responses, 39 utilities will commission combustion turbines as their next unit to go into service, more than 50 percent of all units reported. The second largest catagory is combined cycle units, which number 11 in the survey. Eight utilities reported that their next unit will be baseload steam capacity and four utilities' next units will be hydro. No further breakdown of these hydro units was requested so it is impossible to say what combination of low-head run-of-river or pumped-storage units will result. Fourteen utilities reported that their next unit will be something other than the previously given catagories, including waste-to-energy, wood-burning and other unspecified types.

Natural gas preferred

As might be expected from the breakdown of unit types, fuel preference heavily favors natural gas. Forty utilities report that they will use natural gas to fuel their next unit. An additional 20 utilities have selected oil as their preferred fuel. Only 13 utilities will employ coal for their next unit. Other esoteric or non-conventional fuels were specified by three utilities, hydro by two and nuclear by one. The nuclear plant currently is under construction.

Life extension efforts increase

Utilities were asked what they were doing to improve operation of existing units. Life extension was by far the biggest activity, being reported by 46 utilities.

The second most active area of plant improvement was uprating work. Twenty utilities responding to *EL&P* said they were engaged in uprating one or more units.

Seventeen utilities replied that they have initiated modernization programs to bring older units up to newer performance standards. These may or may not increase unit life expectancy.

Fourteen utilities reported "other" improvement programs, including stricter maintenance scheduling.

Regional spending projections

In the next five years, capital spending for system expansion will tend to mirror the pattern of regional population and business growth. As has been true in the recent past, the area of greatest activity will be the SERC region, followed by the WSCC area. This continues the reversal reported last year, with the WSCC projecting another large decline in capital investment for the current 5-year period and a large increase for SERC. SERC's 5-year spending should climb $1 billion, while WSCC's 5-year spending will fall by almost $5 billion.

Following are figures for regional spending for the period 1989-1993. Amount are in millions of dollars.

ECAR	Gen	T&D	Other
1989	2,009	1,294	291
1990	1,802	1,360	342
1991	1,570	1,441	304
1992	1,221	1,384	350
1993	1,315	1,218	171
Total	9,926	6,697	1,458

Utilities in the East Central Area Reliability Coordinating group will spend just over $16 billion for new system facilities in the period 1989-1993. During this period, three utilites report that they will bring new units into service. Generation spending will decline through 1992, then increase by nearly $1 billion in 1993. Transmission and distribution spending will average about $1.3 billion per year through the period, actually peaking in 1991. Spending for other activities will average under $0.3 billion per year.

Ten utilities are engaged in life extension activities, double all other improvement programs. Uprating and modernization are being pursued by two utilities each, with three miscellaneous programs also mentioned.

ERCOT	Gen	T&D	Other
1989	614	795	230
1990	371	842	199
1991	396	726	256
1992	517	772	311
1993	1,169	915	271
Total	3,067	4,050	1,267

Texas utilities will spend almost $8.4 billion for new facilities and equipment during the next five years. This reflects an increase of almost $1.9 billion or 27 percent over the five year period ending in 1992 and reported last year. However, a rather poor response rate from Texas utilities reduces the confidence level of ERCOT projections.

The heaviest total spending will occur in 1993. Projections of survey results suggest that after this year there will be little new generation expansion activity until 1993, when spending will increase to almost 2.5 times the average spending for the previous four years. T&D expansion spending, which will total $4 billion for the period, also will remain fairly constant through 1992, then increase in 1993. Other spending varies within a fairly narrow range.

Response to the question on plant improvement showed no definite pattern, although uprating appeared to be the favored approach.

Only two new units were reported planned through 2000. One will burn lignite, the other natural gas.

MAAC	Gen	T&D	Other
1989	1,980	1,239	246
1990	1,697	1,228	267
1991	1,337	1,338	250
1992	1,363	1,387	250
1993	1,221	1,205	140
Total	7,598	6,397	1,153

FUEL PER NEXT UNIT	
Gas	40 utilities
Oil	20 utilities
Coal	13 utilities
Misc.	3 utilities
Hydro	2 utilities
Nuclear	1 utilities

Life Extension	46 utilities
Uprating	20 utilities
Modernization	17 utilities
OTHER	14 utilities

	'89-'91	'92-'94	'95-'97	'98-'00	Beyond 2000
ECAR	3	0	4	3	1
ERCOT	0	0	1	1	0
MAAC	5	1	0	0	2
MAIN	0	3	4	2	2
MAPP	2	1	2	1	2
NPCC	2	2	3	2	4
SERC	1	3	3	0	0
SPP	1	0	1	1	2
WSCC	1	3	2	0	2

	<100 MW	100-249 MW	250-499 MW	>500 MW
ECAR	5	5	1	2
ERCOT	0	1	0	1
MAAC	2	2	2	1
MAIN	7	1	0	1
MAPP	6	2	0	0
NPCC	2	1	5	0
SERC	2	4	1	1
SPP	4	2	0	1
WSCC	3	4	0	0

Utilities in the Mid-Atlantic Area Council region will spend some $15.1 billion for new facilities and equipment. This is the fourth largest capital investment program among the nine NERC regions. About 50 percent of the total will go for generating system work, with 42 percent devoted to T&D work. MAAC's generation spending is expected to decrease steadily each year throughout the five-year period, whereas T&D spending will peak in 1992. MAAC is one of the two NERC regions where utilities suffered brownouts and blackouts during the past summer's heat waves. Current plans for individual utilities' next generating units are evenly divided between small units under 100 MW, units between 100 and 249 MW and units between 250 and 499 MW.

The majority of MAAC utilities are involved in some form of unit improvement program. Life extension and modernization are the two most popular activities.

MAIN	Gen	T&D	Other
1989	747	839	274
1990	686	958	234
1991	472	1,020	184
1992	414	1,043	175
1993	157	433	118
Total	2,476	4,293	925

Mid-America Interconnected Network utilities, which include electricity suppliers in Illinois, eastern Wisconsin and northwestern Missouri, will invest 73 percent more for transmission, distribution and substation activities over the next five years than for generation projects. Generation spending will decline steadily over the period, from $747 million in 1989 down to $157 million in 1993. T&D construction activity will increase annually through 1992, when it will peak at slightly more than $1.0 billion, then drop substantially in 1993.

Responses to *EL&P's* survey indicated that no MAIN utilities are planning new units to come on-line prior to 1993, when two small combustion turbine units are scheduled. The region has a substantial reserve generating margin, which was projected to exist until the end of the 1990s. Another superheated summer, such as hit the midwest last year, could change the reserve margin outlook and, consequently, speed up new generating capacity planning activities.

MAIN utilities are busily involved in unit improvement programs, currently favoring life extension and uprating work.

MAPP	Gen	T&D	Other
1989	440	432	269
1990	518	478	256
1991	529	526	225
1992	274	545	221
1993	292	564	215
Total	2,062	2,545	1,186

The Mid-Continent Area Power Planners pool is the smallest of NERC's electrical regions. In total, MAPP utilities also will invest the smallest amount of capital, $5.8 billion, in the five-year period 1989-1993.

MAPP utilities will invest slightly more than $2.0 billion for generation projects during the period, peaking at about $529 million in 1991 and dropping off to less than $300 million each of the last two years of the period. Conversely, MAPP utilities' investment in T&D system will increase each year through 1993, when it should reach $564 million.

Three new small combustion turbine generating units are planned by MAPP utilities for in-service dates through 1993.

Life extension and modernization programs are standard with most MAPP utilities.

NPCC	Gen	T&D	Other
1989	1,081	1,761	372
1990	730	1,532	366
1991	784	1,481	354
1992	966	1,439	358
1993	888	1,455	316
Total	4,469	7,668	1,766

Utilities in the Northeast Power Coordinating Council struggled through a difficult summer in 1988, with blackouts and brownouts hitting a number of utilities. Power purchases, from Canada and elsewhere, played a large role in minimizing inconveniences to customers. NPCC utilities reported only two new generating units to go on-line in the current five-year period, neither of which will be baseload steam capacity.

To meet requirements, NPCC utilities are banking heavily on Canadian power. For this reason, NPCC utilities will invest almost $7.7 billion for new T&D facilities, 71 percent more than the $4.5 billion they will spend for generating system improvments.

A number of New England utilities are involved in life extension projects, including a number of new programs still in the evaluation stage. Unit uprating activities also are increasing.

SERC	Gen	T&D	Other
1989	4,529	2,197	435
1990	3,251	2,325	410
1991	3,421	2,351	447
1992	4,571	2,210	454
1993	5,448	2,381	522
Total	21,220	11,464	2,703

The Southeastern Electric Reliability Council is NERC's largest region, almost any way you look at it—capacity, demand and/or in terms of projected capital spending during the 1989-1993 period. Growth in electric utility activity mirrors shifts in business and population from northern areas to the eastern sun belt states.

Total investment for new and improved system facilities will be almost $35.0 billion, more than one-fourth of total utility industry capital spending for the 1989-1993 period. Of this, $21.1 billion will go for generating system improvements and growth, $11.4 billion for transmission, distribution and substation projects and $2.7 billion for other programs.

SERC's generation system spending during the period represents almost 40 percent of total industry spending for generation programs for the five-years.

Reporting utilities said that three of their six "next" units to go into service would be completed during the 1989-1993 time frame.

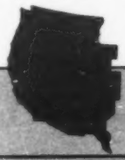
Less than half of SERC utilities reported thay are involved in unit improvement programs, about evenly divided between life extension and uprating projects.

SPP	Gen	T&D	Other
1989	406	760	139
1990	378	851	145
1991	424	808	135
1992	474	830	135
1993	451	963	216
Total	2,133	4,212	770

Southwest Power Pool utilities will devote the majority of their capital spending and construction budgets to transmission, distribution and substation projects in the next five years. Overall, they will spend more than $4.2 billion for T&D system improvement and expansion, almost twice the amount they will devote to generation activities.

Life extension programs are standard in most SPP utilities, a substantial improvement from last year's report. Many SPP utilities also are involved with uprating and unit modernization.

Plans for new capacity generally will not reach fruition until the latter years of the 1990s or beyond the year 2000.



WSCC	Gen	T&D	Other
1989	633	2,273	1,168
1990	591	2,087	1,243
1991	640	2,233	1,321
1992	639	2,502	1,296
1993	629	1,677	776
Total	3,132	10,772	5,804

The Western States Coordinating Council is NERC's largest geographical region and the second largest in terms of capital investment during the 1989-1993 period. While it remains one of the nation's faster-growing regions, growth of capital spending plans have declined substantially in this five-year forecast period from the one reported a year ago.

Generating system spending is projected to fall more than 50 percent in the 1989-1993 period, to $3.1 billion, from the five year period based on figures provided a year ago. T&D spending, although off substantially, is projected to fall only 26 percent, to $10.8 billion. "Other" spending will increase, to $5.8 billion for the period.

WSCC efforts are focused on uprating generating units, although life extension and modernization follow closely behind. New units will be largely combustion turbines or combined cycle units, although three hydro facilities are on the planning schedule currently.

WEPCo/EPA scrubber case sets precident

MILWAUKEE—Wisconsin Electric Power Co.—and scores of other utilities—could wind up spending twice as much for renovations of coal-fired power plants as initial budgets indicate if a court upholds an EPA decision that tightens Clean Air Act regulations.

WEPCo asked the 7th U.S. Court of Appeals in Chicago to review an Environmental Protection Agency decision requiring a WEPCo plant renovation to comply with New Source Performance Standards that would force scrubber installation.

The utility's Port Washington Power Plant renovation involves $71 million of work on turbine-generators, boilers, mechanical and electrical auxiliaries, and common plant-support facilities for all five units. If EPA's ruling that the old facility must be brought up to the standards required of a new plant, which would mandate scrubbers, it would about double renovation cost for the five units, WEPCo said.

Discussions continue

Both WEPCo and the EPA have filed briefs with the court. Jackie Olson, WEPCo spokesperson, said discussions with the EPA's Chicago office have continued. The schedule for the court proceedings is uncertain, she added. A WEPCo attorney said a decision isn't expected before fall.

The project for the plant was proposed to the Public Service Commission of Wisconsin in July 1987. Later that year, the Wisconsin Department of Natural Resources asked the EPA to concur that the renovation work would not fall under the EPA's New Source Performance Standards or Prevention of Significant Deterioration regulation.

Subject to requirements

However, EPA Administrator Lee Thomas did not agree, and decided in October 1988 that, as proposed, the renovation work be subject to all Clean Air Act requirements.

Subsequent correspondence with the EPA to work out the matter failed, and WEPCo filed its petition to the court, Olson explained.

Other similar projects

Olson listed recent similar projects at other utilities that have not had to comply, including: Duke Power Co.'s Dan River Station Unit 2; Texas Utilities' Sandow Power Plant Units 1-3; Cincinatti Gas & Electric Co.'s Beckjord Station Units 1-3; and Hydraco Enterprises, Old Allied Power House.

An Edison Electric Institute spokesperson said the industry is watching the case very carefully.

Steam release untold in WG

BONN, WEST GERMANY—Human errors in reading controls caused a small amount of radioactive steam to be released Dec. 16-17, 1987, at a 1200-MW nuclear plant in Biblis, West Germany, about 30 miles south of Frankfurt, according to a December report by the Associated Press in *The Orlando Sentinel*.

Public outcry

Although no one was hurt, public outcry continues about the coverup, which was first revealed in *Inside NRC*, a biweekly newsletter on nuclear safety. Opponents called for the plant's closing, particularly in light of the 1986 Chernobyl accident, AP said.

Full disclosure better

West German officials admit it would have been better to reveal all the details, but the utility insists it followed all reporting guidelines, stated AP.

A spokesman for an environmental research organization compared the type of human error with what happened at the 1979 accident at Three Mile Island, concluded the AP story.